

**Work Order ID 61853**

Wednesday, September 08, 2010 9:16:33 AM



Page 1

Item ID: D212-664-101

Accept



Setup Start



Revision ID:

Item Name: Crosstube Fwd

Stop



Start Date: 9/8/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 9/24/2010 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan:



Date: 09-08 Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop


**Sequence ID/  
Work Center ID**
**Operation  
Description**
**Set Up/  
Run Hours**
**Tool ID**
**Tool #**
**Plan  
Code**
**Accept  
Qty**
**Reject  
Qty**
**Reject  
Number**
**Insp.  
Stamp**

Draw Nbr	Revision Nbr
D212-664-141	Rev D

100



DOCUMENT CONTROL

DC

Document Control

Memo

0.00

0.00

*for BG 10-11-01*

*S 10/11/01*

110



Pick Kit

0.00

Packaging

Memo

0.00

Packaging

Packaging

*IX Q MB 10-09-21*

120



BENDING MACHINE - CROSSTUBES

0.00

Memo

0.00

CNC Alpha 160 Bender

Bend tube as per Dwg D212-664-141 using CNC bender program 212-fw and Folio D212-664-101

*IX Q MB 10-09-21*

*61853 D212-664-101*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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Approvals:

Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130



QC15- Crosstube Dimensional Check

0.00

8/10/2011

CO

QC

Quality Control

140



Crosstubes

0.00

Crosstubes

Memo

0.00

Crosstubes

1-Drill pilot holes in tube as per Dwg D212-664-141 using drill Jig DT8548 &amp; DT8549,using drill table DT8577, set-up towers in hole #7 as per QSI 10

2-Ream hole to finish size in tube as per Dwg D212-664-141 using drill Jig DT8548 &amp; DT8549. Check dimensions between holes, both sides on both cuffs, to ensure alignment with saddle holes.

3-Scribe part # and batch # using vibrating stylus as per Dwg D212-664-141

4-Deburr &amp; Inspect for surface damage. Repair damage within limits as per Dwg D212-664-141

MB  
10-09-21

DP 10-9-21

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D212-664-101 PAR #: N/A Fault Category: crosshole NCR: Yes No DQA: AS Date: 10.11.08  
 Resolution: re-work Disposition: re-work QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: 61853		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10.09.29	PD	Tube was polished 3 TIMES DUE TO NDT FINDINGS	<u>CP</u> 10/09/29 QSI 042	Acceptable. CP MEASURED WALL THICKNESSES AND FOUND NO ABNORMAL RESULTS. WALL THICKNESSES IN CRITICAL AREAS WERE ABOVE NOMINAL	N/A	<u>CP</u> 10/11/01 QSI 042	<u>CP</u> 10.09.29 QSI 042	<u>S</u> 10/11/01
		RC: Process.						

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Cust Item ID:

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
Description

150



HandFXtube

Hand Finishing Crosstubes

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

0.00

0.00

0.00

0.00

0.00

0.00

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

S 10/08/21

(40)

170



Outsource2

Outsource process - NDT

Outsource process - NDT per QSI038 4.1

0.00

CL 10/9/2010

Pto →

Memo  
Liquid Penetrant Inspection as per QSI 038  
Issue P/O: 12615  
LPI as per ASTM 1417 Level 2  
Attach copy of NDT results to work order

R/0:12653

CL 10/9/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D212-664-101 PAR #: N/A Fault Category: Cleavage NCR: Yes No DQA: 18 Date: 10.11.08  
 Resolution: re-work Disposition: no-werk QA: N/C Closed: ✓ Date: 16/11/08

NCR: 61853		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/9/22	170	Large indications were found running lengthwise on the tube 2" to 26" from the cuff. R.C. process	✓ QSI042	<ul style="list-style-type: none"> <li>- Measure wall thickness with an ultrasonic &amp; record.</li> <li>- re-grind the affected areas to remove the indications.</li> <li>- Visually inspect w/t reference only LP inspection to determine if indications removed.</li> </ul>	Q 10.10.07 DP 10-9-28 S was not	✓ 10/10/07	✓ QSI042	✓ 1009.22
			✓ QSI042	<ul style="list-style-type: none"> <li>- Conversion chart per QSI0005</li> <li>- Perform an ultrasonic measurement along the tube &amp; record on a FAD sheet, to determine if tube is acceptable, per Engineering</li> </ul>	Done Beld 10-9-28 Q 10.10.07	✓ 10/10/07	✓ QSI042	✓ 1009.22
			✓ QSI042	<ul style="list-style-type: none"> <li>- Issue P/O to have tube NDT'd</li> </ul>	CY 10/09/28	✓ S 10/10/07	✓ QSI042	✓ 1009.22

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

180



Receive &amp; Inspect for Damage &amp; Mat'l Certs

0.00

c2 10/9/22 ①

Packaging

Memo

0.00

P/10/9/22 ①

Packaging

Ensure copy of NDT results attached to work order.

190



QC5- Inspect part completeness to step on W/O

0.00

ml 10 8 22 ①

QC

Memo

0.00

Quality Control

Inspect for damage &amp; ensure results are as per Dwg D212-664-141

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Cust Item ID:

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200



SprayPaint

Spray Painting per QSI005 4.2

0.00

SprayPaint

Memo

0.00

1-Prime inside and outside crosstube as per QSI 005 4.2  
2-Paint outside crosstube with White Imron as per QSI 005 4.2PRIME:  
Start Time: 9:00  
Finish Time: 10:00PAINT:  
Start Time: 2:00  
Finish Time: 3:00

210



QC

QC14- Inspect Spray Paint

0.00

Memo

0.00

Quality Control

Then, Wrap in plastic bag to protect from scratches


 10 - 10 - 15 (X)


 10 10 28 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

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Item ID: D212-664-101

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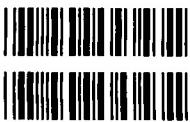
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Cust Item ID:

Required Date: 9/24/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInspec.  
Stamp

220



Crosstubes

Crosstubes

Crosstubes

Memo

0.00

*m* 10 10 28 ①

1- Lightly scuff the bonded area using a 320 grit sand paper and clean the area  
with 41058 wash 'n' wipe

2-Install supports with magnobond as per QSI 015 Adhere for 12 Hrs  
A/R 6398 Magnobond Batch: 115580 EXP: 07/2011

*Torque: m 10.10.28 ①*

230



QC5- Inspect part completeness to step on W/O

0.00

*8/10/10/79*

QC

Quality Control

Memo

0.00

*(X)* \_\_\_\_\_

240



Pick Kit

0.00

Packaging

Packaging

Memo

0.00

*(W/M) sf* \_\_\_\_\_

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

**Work Order ID 61853**

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Item Name: Crosstube Fwd

Stop



Start Date: 9/8/2010 Start Qty: 1.00



Cust Item ID:

Required Date: 9/24/2010 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

250



QC4- 100% Inspect kits for completeness

0.00

8/10/10



QC

Memo

0.00

Quality Control

260



Packaging

0.00

Rev E

Packaging

Memo

0.00

Identify and pack for shipping as per PPP D212-664-101

270



QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Wednesday, September 08, 2010 9:16:36 AM

Page 1  
3

Work Order ID: 61853



Parent Item: D212-664-101



Parent Item Name: Crosstube Fwd

Start Date: 9/8/2010

Required Date: 9/24/2010

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev:E 04.02.16 Reformat KJ/DS

IPP Rev:F 06-03-29 Remove Coments on Pick List JLM

IPP Rev:G 07-04-30 As per Rev C JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D212-664-101TRN



Manufactured

No

110

Each

2.0000



1

1

B-61855 MB 10-07-20

Crosstube Turning Detail

Location      Loc Qty      Loc Code

LG

2

61399

1

61400

1

D3595-063-450



Manufactured

No

230

Each

131.6590



4

4.210526

MM 10 10 28

RUBBER CUSHION

Location      Loc Qty      Loc Code

LG

131.6589737

53775

5.97897368

58161

3.56

59580

10.12

60983

33

61465

79

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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# Picklist Print

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Wednesday, September 08, 2010 9:16:36 AM

Work Order ID: 61853



Parent Item: D212-664-101



Parent Item Name: Crosstube Fwd

Start Date: 9/8/2010

Required Date: 9/24/2010

Start Qty: 1.00

Required Qty: 1.00

MS21920-25



Clamp(per MIL-DTL-8783C)

Purchased No

220

Each

87.0000

4

4

*M/L 10 10 28*

Location	Loc Qty	Loc Code
LG	55	
113281	0	
114759	5	
<u>114901</u>	25	
115278	25	
ST451	32	
113281	5	
113282	18	
113744	1	
114141	8	

D2893-1



2.75 Support

Manufactured No

220

Each

31.0000

2

2

*M/L 10 10 28*

Location	Loc Qty	Loc Code
LG	31	
56354	12	
<u>59457</u>	19	

D3428-1



Placard

Manufactured No

240

Each

5.0000

1

1

*10/11/18 J 362096*

Location	Loc Qty	Loc Code
ST056	5	
<u>60484</u>	5	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Work Order ID: 61853



Parent Item: D212-664-101



Parent Item Name: Crosstube Fwd

Start Date: 9/8/2010

Required Date: 9/24/2010

Start Qty: 1.00

Required Qty: 1.00

AN6-35A

Purchased

No

240

Each

39.0000

4



14/11/11

SL

BOLT

Location	Loc Qty	Loc Code
----------	---------	----------

ST343	39	
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115204	39	
--------	----	--

--	--	--

AN6-36A

Purchased

No

240

Each

48.0000

4



4/14/11

SL

Bolt

Location	Loc Qty	Loc Code
----------	---------	----------

ST343	48	
-------	----	--

115016	48	
--------	----	--

--	--	--

MS21042L6

Purchased

No

240

Each

302.0000

6



4/19/11

SL

Nut

Location	Loc Qty	Loc Code
----------	---------	----------

ST300	302	
-------	-----	--

111578	4	
--------	---	--

114495	98	
--------	----	--

115300	200	
--------	-----	--

--	--	--

AN960JD616

NAS1149D0663J Purchased

No

240

Each

0.0000

18



5/18/11

SL

Washer

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

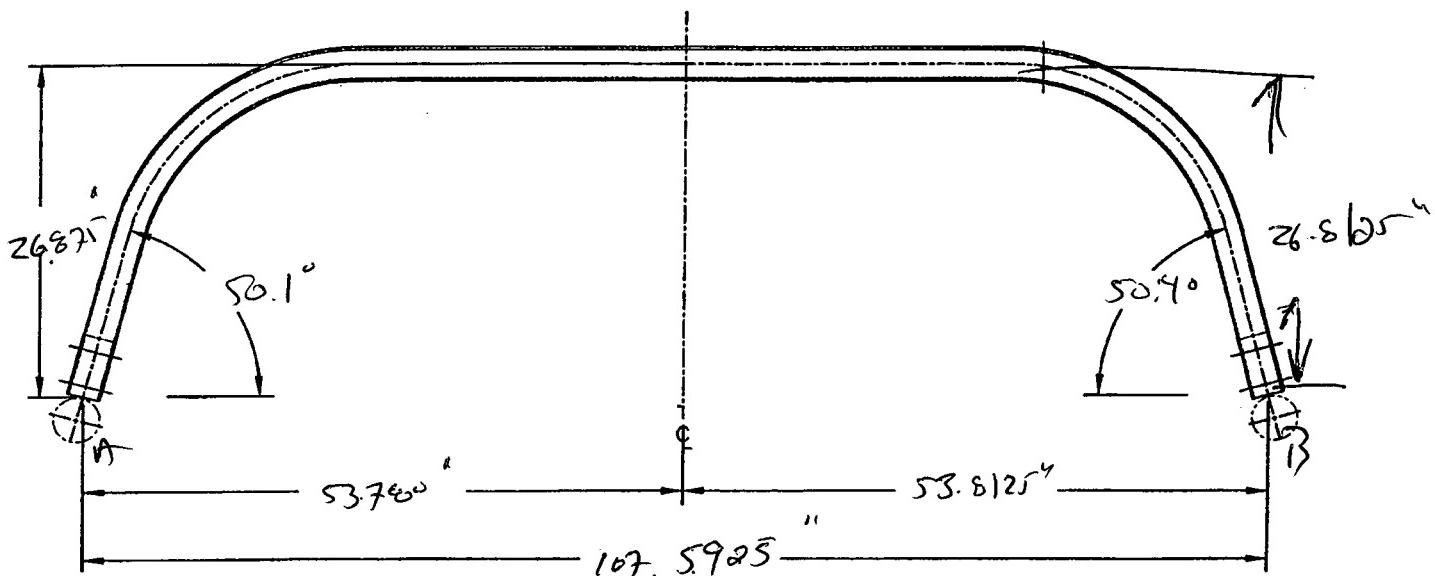
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	61853
Description: Crosstube High Fwd (205/212/412)	Part Number:	D212-664-101
Inspection Dwg: D212-664-141 Rev: D		Page 1 of 1

Required Dimension	Min	Max
Height	26.79	27.05
1/2 Span	53.59	53.85
Angle	49	52
Total Span	107.18	107.7



Comments

QC15 Inspection	S
Date	10/05/04

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	
B	07.05.31	Dimensions updated per Dwg Rev C	KJ/JM	
C	10.04.01	Dwg Rev updated	KJ	JZ

W/O:		WORK ORDER CHANGES					
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NOTE: Date & initial all entries

8 7 6 5 4 3 2 1



Item	Qty -141	Qty -141B	Part Number	Description
1	X		D212-664-141	CROSSTUBE ASSEMBLY (205/212/412 HIGH FWD)
2		X	D212-664-141B	CROSSTUBE ASSEMBLY (214 HIGH FWD)
3	1	1	D6005-128	CROSSTUBE
4	2	2	D2893-1	SUPPORT
5	4	4	D3595-063-450	RUBBER CUSHION
6	4	4	MS21920-25	CLAMP (OR MS21920-26)
7	A/R	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)

**GENERAL NOTES:**

- 1) MATERIAL: MANUFACTURED FROM D6005-128  
FINISHED LENGTH = 126.514±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D212-664-XXX" AND BATCH NUMBER ON INSIDE OF CUFF  
USING VIBRATING STYLUS
- 7) WEIGHT: D212-664-141 = 33.6 lbs (PER IIN-D212-664)  
D212-664-141B = 33.6 lbs (PER IIN-D212-664)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2893-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 TO THE SURFACE OF D2893-1 THAT WILL BE IN CONTACT WITH THE CROSSTUBE PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-25 CLAMPS (OR -26) WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE D2893-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE OF CROSSTUBE SUPPORT.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

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WITHOUT NOTICE  
WORK ORDER  
NO. *4053*  
*B80908*

RELEASED  
2009-10-29  
*MM*

D	REFORMAT/REVISE GENERAL NOTES/PART LIST; REORGANIZED VIEWS AND REFORMATTED DRAWING TO CURRENT STANDARDS; ADD -141B (ZN B4-2, D4-2); REMOVED REF & ADD TOLERANCES (ZN B4-3, C6-3, C8-3 & B6-3); RELOCATED FLAG #6 PER PAR 08-046 (ZN A5-3); MOVED TURNING DETAIL & UPDATED TOLERANCE TO SHEET 4	RF	09.09.30
C	REMOVE -851 ABRASION STRIP; ADD MAGNOBOND 6398, CUSHION, REVERSE CLAMPS	PH	07.03.08
B	ADD HOLES FOR COMPATABILITY WITH BHT/AA SKIDTUBES	PH	05.02.04
A	NEW ISSUE	PH	00.12.12
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>PH</i>	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF	REV. D	
CHECKED	<i>PH</i>	DRAWING NO. D212-664-141	
MFG. APPR.	<i>DA</i>	SHEET 1 OF 4	
APPROVED	<i>PH</i>	TITLE XTUBE ASS'Y (205/212/412 HI FWD) NTS	
DE APPR.	<i>PH</i>	SCALE	
DATE	09.09.30	COPYRIGHT © 2009 BY DART AEROSPACE LTD. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

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A

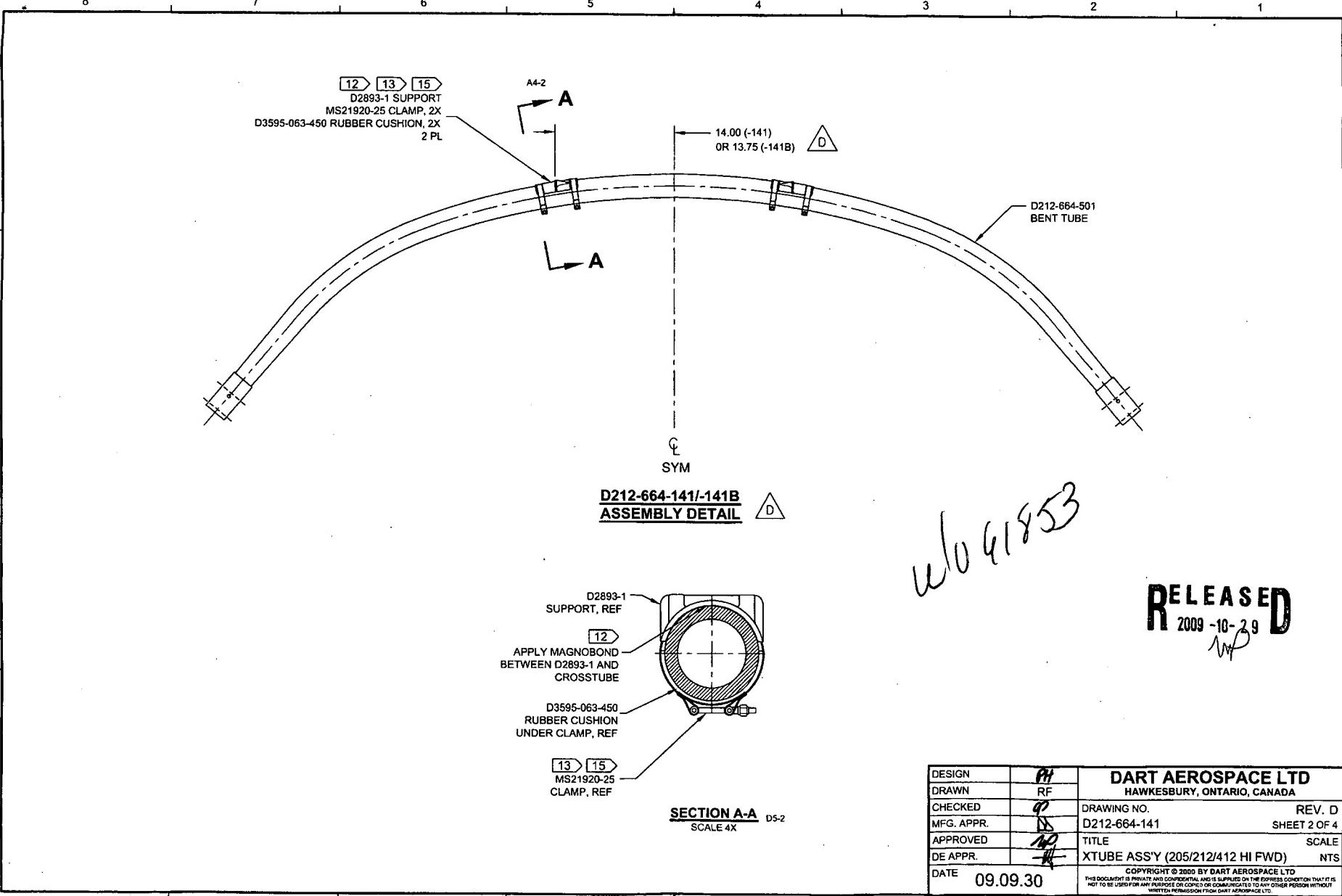
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
DRAWN	RF	REV. D
CHECKED	RF	DRAWING NO. D212-664-141
MFG. APPR.	RF	SHEET 2 OF 4
APPROVED	RF	TITLE XTUBE ASS'Y (205/212/412 HI FWD) NTS
DE APPR.	RF	DATE 09.09.30

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W

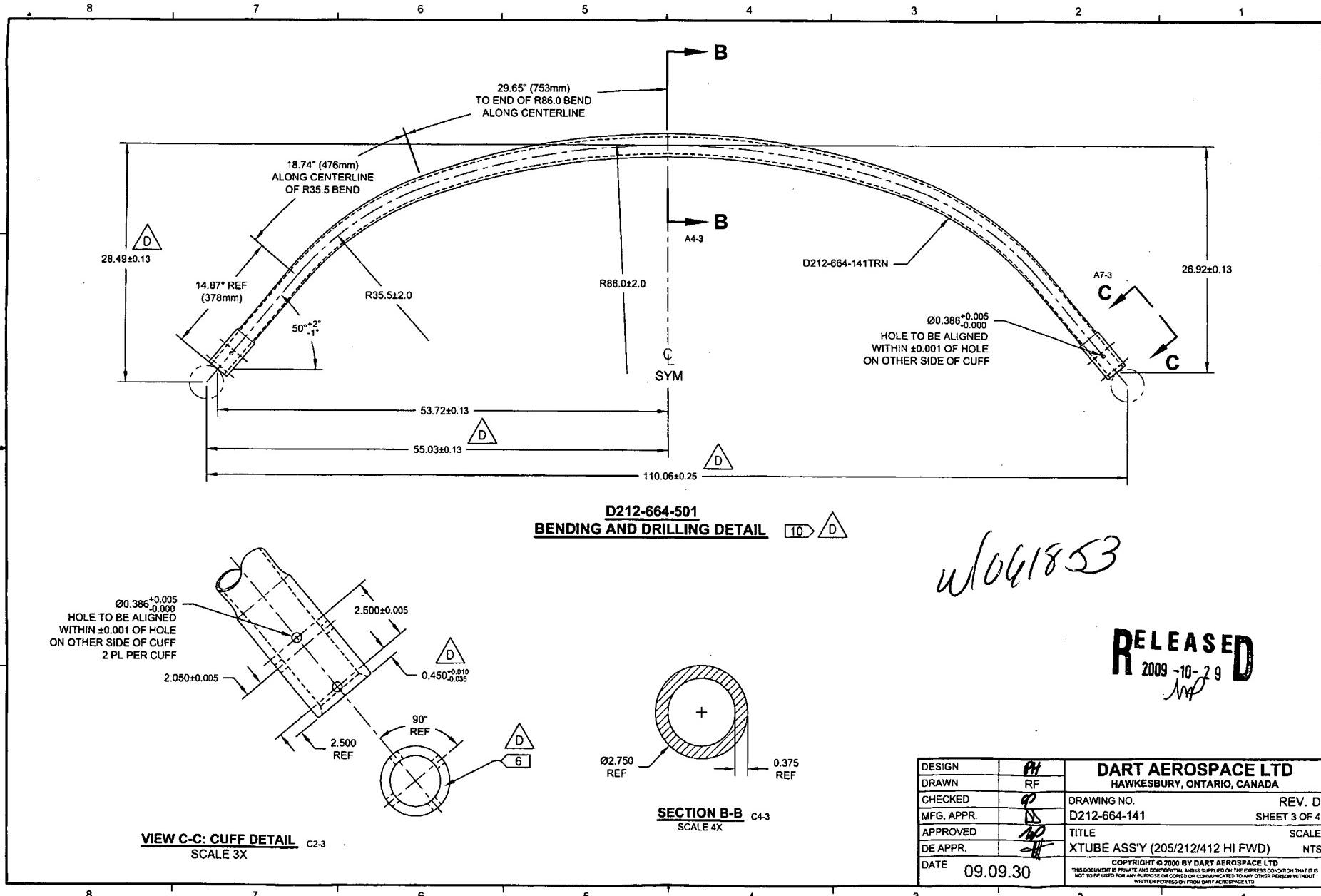
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



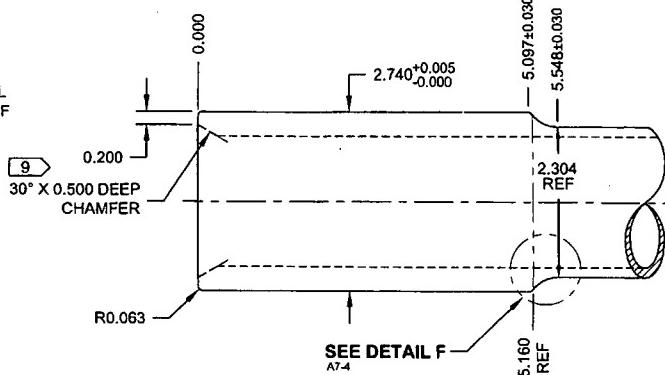
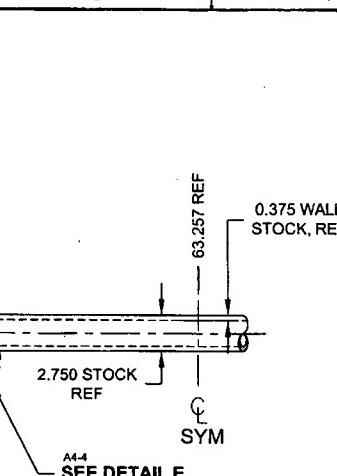
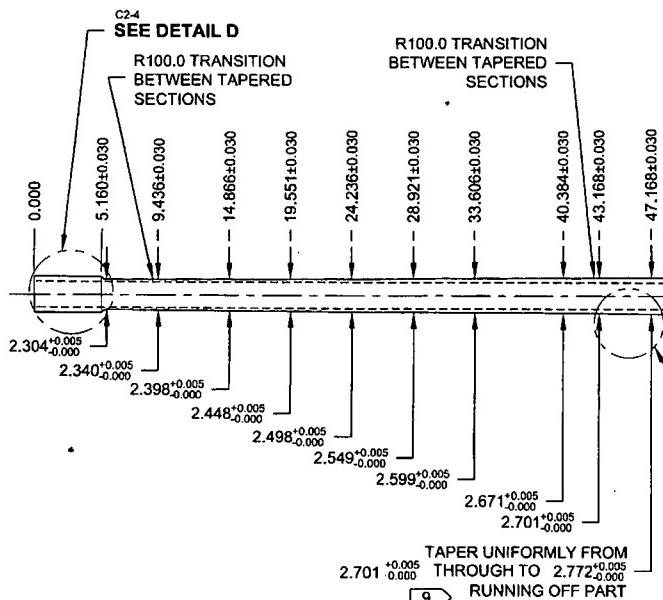
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

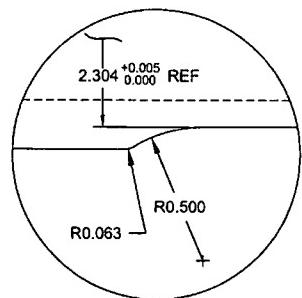
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

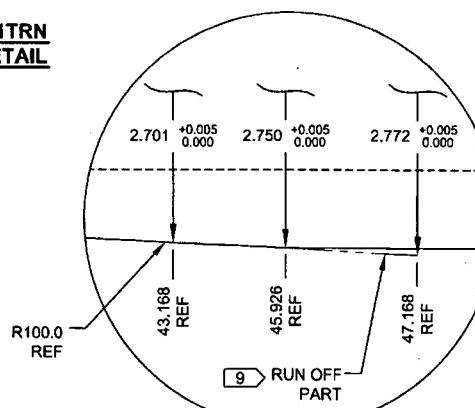


DETAIL D:  
CROSSTUBE CUFF D8-4  
SCALE 5X

w/661853



DETAIL F:  
CUFF TRANSITION C2-4  
SCALE 10X



DETAIL E:  
TAPER RUN-OFF C5-4  
NOT TO SCALE

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2009-10-29

AP

DESIGN	PH	DART AEROSPACE LTD
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA
CHECKED	PF	DRAWING NO.
MFG. APPR.	DS	D212-664-141
APPROVED	AP	SHEET 4 OF 4
DE APPR.	AP	TITLE
DATE	09.09.30	SCALE
		XTUBE ASS'Y (205/212/412 HI FWD) NTS

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



# LIQUID PENETRANT TEST REPORT

P- 15193

CLIENT	<u>DACT Aerospace</u>	DATE	<u>SEPT-21-2010</u>	TIME	<u>AM</u>	<input checked="" type="checkbox"/>	<u>PM</u>	<input type="checkbox"/>
ATTENTION	<u>LINDA / CHANTEL</u>	ACUREN JOB NO.	<u>188 - 10 - 0889</u>					
ADDRESS	<u>1270 ABERDEEN ST.</u>	PO/WO No.						
PROJECT	<u>HAWKES BAY PLANT</u>	WORK LOCATION						
ITEM(S) EXAMINED	<u>F. P. I. (10) ON CLASS TUBES &amp; MACHINED PARTS</u>	ACCEPTANCE STD.	<u>ASTM 1417</u>	REV./DATE	<u>2005</u>			

JOB DESCRIPTION	PROCEDURE NO. LT0002 REV./DATE	TECHNIQUE NO. LT-TECH 2 REV./DATE
PART NO.	MATERIAL <u>STAINLESS STEEL</u> THICKNESS	
SCOPE	<u>WET FLUORESCENT LIQUID PENETRANT + ALUMINUM TERMINAL INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE</u>	

TEST DETAILS								
METHOD	<input checked="" type="checkbox"/> FLUORESCENT	<input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH	<input type="checkbox"/> SOLVENT REMOVABLE	<input type="checkbox"/> POST EMULSIFIED			
FAMILY BRAND	<u>MAGNAFLUX</u>		BLACK LIGHT S/N <u>16459</u>	<input type="checkbox"/> OUTPUT > 1000 $\mu$ W/cm <sup>2</sup>	<input type="checkbox"/> AMBIENT < 2 fc			
PENETRANT	<u>2L67</u>	MINIMUM DWELL TIME <u>45 sec</u>	MIN.	LIGHTING EQUIP. <input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT	<input type="checkbox"/> OUTPUT > 100 fc @ SURFACE			
PENETRANT REMOVER	<u>H2O</u>	MINIMUM DRY TIME <u>&gt;10</u>	MIN.	OTHER <u>LASING</u>				
DEVELOPER	<u>SKD 52</u>	MINIMUM DWELL TIME <u>10</u>	MIN.	LIGHT METER S/N <u>1048866</u>	CAL DUE DATE <u>OCT 17 2010</u>			
DEVELOPER TYPE	<input checked="" type="checkbox"/> NON AQUEOUS	<input type="checkbox"/> AQUEOUS	<input type="checkbox"/> DRY					

TEST SURFACE								
SURFACE CONDITION	<input type="checkbox"/> AS GROUND	<input type="checkbox"/> AS WELDED	<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> SHOT BLASTED	<input checked="" type="checkbox"/> CLEAN BARE METAL			
SURFACE TEMPERATURE	<input type="checkbox"/> < -4°C/ 20°F		<input type="checkbox"/> -4°C/ 20°F TO 10°C/50°F		<input checked="" type="checkbox"/> 10°C/50°F TO 52°C/125°F			<input type="checkbox"/> > 52°C/125°F

RESULTS- <input checked="" type="checkbox"/> METRIC <input type="checkbox"/> IMPERIAL		
<p>7 SLEEVES → W.O. 62188 ✓</p> <p>1 CROSS TUBE → W.O. 61298 ✓</p> <p>1 CROSS TUBE → W.O. 61299 ✓</p> <p>1 CROSS TUBE → W.O. 61418 ✓</p> <p>1 CROSS TUBE → W.O. 61417 ✓</p> <p>1 CROSS TUBE → W.O. 61959 ✓</p> <p>1 CROSS TUBE → W.O. 61958 ✓</p> <p>1 CROSS TUBE → W.O. 61852 ✓</p> <p>1 CROSS TUBE → W.O. 61853 ✓</p> <p>1 CROSS TUBE → W.O. 61507 ✓</p> <p>1 CROSS TUBE → W.O. 61508 ✓</p>		
<p>INDICATIONS ON CROSS TUBES W.O. #'S → 61852, 61853.</p>		

Scope of Services  
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc., based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care  
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES		
CLIENT REPRESENTATIVE	<u>Eric Downing</u> PRINT	DTR # <u>E63591</u>
TECHNICIAN (SIGNATURE):	<u>Mike J. Huston</u>	REPORT REVIEWED BY:
NAME (PRINT):		NAME INITIALS
1 <sup>ST</sup> TECHNICIAN	2 <sup>ND</sup> TECHNICIAN	
CGSB LEVEL <u>II</u>	SNT LEVEL	CGSB LEVEL
CGSB REG. NO. <u>6606</u>		SNT LEVEL
CGSB REG. NO.	CGSB REG. NO.	

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PINK - TECHNICIAN COPY

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# LIQUID PENETRANT TEST REPORT

P- 15194.

CLIENT	DAR AEROSPACE	DATE	SEPT-28-2010	TIME	AM <input checked="" type="checkbox"/> PM <input type="checkbox"/>
ATTENTION	LINDA / CHANTEL	ACUREN JOB NO.	108-10-0895		
ADDRESS	1270 ABERDEEN HAWKES BAY CNT.	PO/WO NO.	12653 -		
PROJECT	F.P.I. ON CROSS TUBES AND MACHINED PARTS.				
ITEM(S) EXAMINED	(4) CROSS TUBES.	WORK LOCATION	HAWKESBAY PLANT		
		ACCEPTANCE STD.	ASTM 1417	REV./DATE	2005

JOB DESCRIPTION	PROCEDURE NO. LT-0002 REV./DATE	-	TECHNIQUE NO. LT-TAK-2 REV./DATE	-
PART NO.	MATERIALS STAINLESS STEEL THICKNESS ALUMINUM			
SCOPE	WET FLUORESCENT LIQUID PENETRANT INSPECTION CARRIED OUT ON 100% EXTERNAL SURFACE			

TEST DETAILS					
METHOD	<input checked="" type="checkbox"/> FLUORESCENT	<input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH	<input type="checkbox"/> SOLVENT REMOVABLE	<input type="checkbox"/> POST EMULSIFIED
FAMILY BRAND	MAS NA Flux				
PENETRANT	ZL 67	MINIMUM DWELL TIME	45/10	MIN.	BLACK LIGHT S/N 16954 <input type="checkbox"/> OUTPUT > 1000 μW/cm <sup>2</sup> <input type="checkbox"/> AMBIENT < 2 fc
PENETRANT REMOVER	420	MINIMUM DRY TIME	>10	MIN.	LIGHTING EQUIP. <input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE
DEVELOPER	SKD 52	MINIMUM DWELL TIME	10	MIN.	OTHER LAB. NO. <input type="checkbox"/> LIGHT METER S/N 1098866 CAL DUE DATE OCT 19
DEVELOPER TYPE	<input type="checkbox"/> NON AQUEOUS	<input type="checkbox"/> AQUEOUS	<input type="checkbox"/> DRY		2010

TEST SURFACE					
SURFACE CONDITION	<input type="checkbox"/> AS GROUND	<input type="checkbox"/> AS WELDED	<input checked="" type="checkbox"/> MACHINED	<input type="checkbox"/> SHOT BLASTED	<input checked="" type="checkbox"/> CLEAN BARE METAL
SURFACE TEMPERATURE	< - 4°C/ 20°F <input type="checkbox"/> - 4°C/ 20°F TO 10°C/50°F <input checked="" type="checkbox"/> 10°C/50°F TO 52°C/125°F <input type="checkbox"/> > 52°C/125°F				

RESULTS- ( <input type="checkbox"/> METRIC <input type="checkbox"/> IMPERIAL )	16 - STUDS-W.O. 61370 ✓	SEE PREVIOUS F.P.I. REPORT # 15193 IN REGARDS TO - CROSS TUBE-W.O. 61852 - W.O. 61853
	1 - CROSS TUBE-W.O. 62045 ✓	
	1 - CROSS TUBE-W.O. 61370 ✓	
	1 - CROSS TUBE-W.O. 61852 ✓	
	1 - CROSS TUBE-W.O. 61853 ✓	

Scope of Services  
 The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care  
 In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES		
CLIENT REPRESENTATIVE	Matthew Murphy <i>Matthew Murphy</i>	DTR # E-63393
TECHNICIAN (SIGNATURE):	<i>N.K. Houston</i>	REPORT
NAME (PRINT):		REVIEWED BY:
		NAME
		INITIALS
CGSB LEVEL	1 <sup>ST</sup> TECHNICIAN	2 <sup>ND</sup> TECHNICIAN
CGSB REG. NO.	CGSB LEVEL	CGSB LEVEL
	SNT LEVEL	SNT LEVEL
	CGSB REG. NO.	CGSB REG. NO.

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p/n D212-664-141  
BATCH B61852

Cond: Bent

LOCATION	OD1	OD2	ODavg	ODdwg	Dev.	Measurement				Deviation from nominal			
						Wall 1 top	Wall 2 bottom	Wall 3 side 1	Wall 4 side 2	Wall 1 top	Wall 2 bottom	Wall 3 side 1	Wall 4 side 2
5.160	2.309	2.312	2.311	2.304	0.007	0.184	0.136	0.157	0.154	0.032	-0.016	0.005	0.002
9.436	2.318	2.353	2.336	2.340	-0.004	0.204	0.149	0.173	0.169	0.034	-0.021	0.003	-0.001
14.866	2.309	2.481	2.395	2.398	-0.003	0.235	0.169	0.208	0.200	0.036	-0.030	0.009	0.001
19.551	2.329	2.555	2.442	2.448	-0.006	0.254	0.206	0.233	0.231	0.030	-0.018	0.009	0.007
24.236	2.415	2.572	2.494	2.498	-0.005	0.278	0.236	0.254	0.259	0.029	-0.013	0.005	0.010
28.921	2.497	2.604	2.551	2.549	0.002	0.301	0.262	0.288	0.275	0.027	-0.013	0.014	0.001
33.606	2.547	2.645	2.596	2.599	-0.003	0.326	0.291	0.310	0.300	0.026	-0.009	0.010	0.000
40.384	2.660	2.682	2.671	2.671	0.000	0.360	0.322	0.349	0.339	0.025	-0.013	0.014	0.004
STOCK	2.738	2.750	2.744	2.750	-0.006	0.383	0.375	0.376	0.383	0.008	0.000	0.001	0.008

LOCATION	OD1	OD2	ODavg	ODdwg	Dev.	Wall 1	Wall 2	Wall 3	Wall 4	Wall 1	Wall 2	Wall 3	Wall 4
						top	bottom	side 1	side 2	top	bottom	side 1	side 2
5.160	2.300	2.302	2.301	2.304	-0.003	0.172	0.148	0.158	0.152	0.020	-0.004	0.006	0.000
9.436	2.311	2.348	2.330	2.340	-0.011	0.192	0.160	0.178	0.162	0.022	-0.010	0.008	-0.008
14.866	2.322	2.464	2.393	2.398	-0.005	0.224	0.188	0.215	0.190	0.025	-0.011	0.016	-0.009
19.551	2.331	2.547	2.439	2.448	-0.009	0.247	0.223	0.243	0.211	0.023	-0.001	0.019	-0.013
24.236	2.396	2.573	2.485	2.498	-0.014	0.273	0.250	0.272	0.232	0.024	0.001	0.023	-0.017
28.921	2.487	2.603	2.545	2.549	-0.004	0.292	0.273	0.292	0.265	0.018	-0.001	0.018	-0.009
33.606	2.540	2.644	2.592	2.599	-0.007	0.315	0.301	0.314	0.291	0.015	0.001	0.014	-0.009
40.384	2.654	2.681	2.668	2.671	-0.003	0.348	0.339	0.346	0.328	0.013	0.004	0.011	-0.007
STOCK	2.741	2.750	2.746	2.750	-0.005	0.381	0.372	0.376	0.375	0.006	-0.003	0.001	0.000

p/n D212-664-141  
BATCH B61853

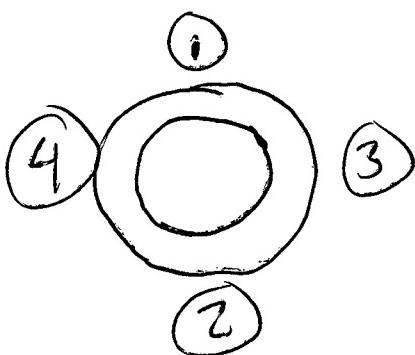
Cond: Bent

LOCATION	OD1	OD2	ODavg	ODdwg	Dev.	Wall 1	Wall 2	Wall 3	Wall 4	Wall 1	Wall 2	Wall 3	Wall 4
						top	bottom	side 1	side 2	top	bottom	side 1	side 2
5.160	2.306	2.313	2.310	2.304	0.006	0.155	0.163	0.161	0.155	0.003	0.011	0.009	0.003
9.436	2.315	2.351	2.333	2.340	-0.007	0.177	0.171	0.169	0.172	0.007	0.001	-0.001	0.002
14.866	2.319	2.463	2.391	2.398	-0.007	0.209	0.196	0.194	0.209	0.010	-0.003	-0.005	0.010
19.551	2.335	2.541	2.438	2.448	-0.010	0.234	0.228	0.214	0.239	0.010	0.004	-0.010	0.015
24.236	2.414	2.566	2.490	2.498	-0.008	0.255	0.256	0.239	0.266	0.006	0.007	-0.010	0.017
28.921	2.499	2.599	2.549	2.549	0.000	0.288	0.284	0.265	0.291	0.014	0.010	-0.009	0.017
33.606	2.546	2.644	2.595	2.599	-0.004	0.310	0.303	0.289	0.314	0.010	0.003	-0.011	0.014
40.384	2.659	2.682	2.671	2.671	-0.001	0.344	0.342	0.330	0.345	0.009	0.007	-0.005	0.010
STOCK	2.736	2.747	2.742	2.750	-0.008	0.371	0.386	0.375	0.368	-0.004	0.011	0.000	-0.007

LOCATION	OD1	OD2	ODavg	ODdwg	Dev.	Wall 1	Wall 2	Wall 3	Wall 4	Wall 1	Wall 2	Wall 3	Wall 4
						top	bottom	side 1	side 2	top	bottom	side 1	side 2
5.160	2.302	2.309	2.306	2.304	0.002	0.153	0.165	0.161	0.182	0.001	0.013	0.009	0.030
9.436	2.308	2.355	2.332	2.340	-0.008	0.169	0.176	0.155	0.183	-0.001	0.006	-0.015	0.013
14.866	2.315	2.467	2.391	2.398	-0.007	0.201	0.210	0.180	0.222	0.002	0.011	-0.019	0.023
19.551	2.324	2.544	2.434	2.448	-0.014	0.220	0.230	0.205	0.256	-0.004	0.006	-0.019	0.032
24.236	2.403	2.567	2.485	2.498	-0.013	0.248	0.262	0.231	0.277	-0.001	0.013	-0.018	0.028
28.921	2.495	2.607	2.551	2.549	0.002	0.284	0.283	0.266	0.298	0.010	0.009	-0.008	0.024
33.606	2.554	2.642	2.598	2.599	-0.001	0.308	0.309	0.293	0.318	0.008	0.009	-0.007	0.018
40.384	2.657	2.693	2.675	2.671	0.004	0.342	0.342	0.332	0.350	0.007	0.007	-0.003	0.015
STOCK													

### WALL MEASUREMENTS

AP  
10.10.07



## REFERENCE ONLY

## 5.0 PARTS LIST

5.1 HIGH GEAR CROSSTUBES

Item	-101	-201	-203	Part Number	Description
	X			D212-664-101	CROSSTUBE INSTALLATION, 204/205/210/212/214/412, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH FWD
		X		D212-664-201	CROSSTUBE INSTALLATION, 204/205/210/212/214, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH AFT
			X	D412-664-203	CROSSTUBE INSTALLATION, 412 HIGH AFT
1	1			D212-664-141	CROSSTUBE ASSEMBLY, 204/205/210/212/214/412, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH FWD
2		1		D212-664-241	CROSSTUBE ASSEMBLY, 204/205/210/212/214, UH-1H, UH-1A/B/E/F/L/P, TH-1F/L, HH-1K HIGH AFT
3			1	D412-664-243	CROSSTUBE ASSEMBLY, 412 HIGH AFT
10	2			* D2893-1	SUPPORT
11	4			* D3595-063-450	RUBBER CUSHION
12	4			* MS21920-25	CLAMP (OR MS21042-26)
13	4			AN6-35A	BOLT
14	4			AN6-36A	BOLT
15	6			MS21042L6	NUT (OR MS21042-6)
16	18			AN960JD616	WASHER
20	2			* D2940-1	SUPPORT
21	4			* D3595-063-530	RUBBER CUSHION
22	4			* MS21920-28	CLAMP (OR MS21042-30)
23	4			AN6-40A	BOLT
24	2			AN6-41A	BOLT
25	6			MS21042L6	NUT (OR MS21042-6)
26	18			AN960JD616	WASHER
30		1		* D2896-1	SUPPORT
31		2		* D2856-600-1009	ABRASION STRIP
32		2		* D3595-063-570	RUBBER CUSHION
33		4		* MS21920-28	CLAMP
34		2		* MS21920-30	CLAMP (OR MS21042-32)
35		4		AN6-40A	BOLT
36		2		AN6-41A	BOLT
37		6		MS21042L6	NUT (OR MS21042-6)
38		18		AN960JD616	WASHER
39		2		* D3189-1	CHAFING SHIELD
50	1	1		D3428-1	PLACARD

\*REFERENCE ONLY. PARTS ARE INCLUDED IN D212-664-141/-241 OR D412-664-243 ASSEMBLIES ABOVE  
 NOTE: KITS INCLUDE EXTRA HARDWARE FOR COMPATIBILITY WITH BOTH DART AND BELL/AA  
 SKIDTUBES.

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